

REMARKS

In the Claims:

Independent claims 1 and 16 have been amended to clarify the distinction between data relating to a product measured by an on-line analyzer and reactor process variables. Support for these amendments is found in the Specification such as at page 5, lines 29-31.

Rejections Under 35 USC 102:

Claims 1, 4-6, 13-17, 20-22 and 27 were rejected under 35 USC 102(b) over McDonald et al., U.S. Patent 6,072,576.

Rejections Under 35 USC 103:

Claims 2 and 26 were rejected under 35 USC 103(a) over McDonald et al. in view of Kilius et al., U.S. Patent 5,324,755.

Claims 3, 7, 8, and 23-25 were rejected under 35 USC 103(a) over McDonald et al. in view of Dechene et al., U.S. Patent 5,408,181.

Claims 9 and 10 were rejected under 35 USC 103(a) over McDonald et al. in view of Dechene et al. as applied to claims 1, 5, and 8, and further in view of Kilius et al..

Claims 11 and 12 were rejected under 35 USC 103(a) over McDonald et al. in view of Dechene et al. and Kilius et al. as applied to claims 1, 5, 8, and 9 above, and further in view of Stephens et al., U.S. Published Application 2003/0073787.

Claims 18 and 19 were rejected under 35 USC 103(a) over McDonald et al. in view of Bowden et al., U.S. Patent 3,976,981.

Applicants' Arguments

Applicants' respectively request that the amendments made herein be considered and the claims be deemed allowable.

Applicants believe the claim rejections based on McDonald et al. are due to a mischaracterization of the teachings of McDonald et al. with respect to Applicants' claims. The amendments submitted herewith are meant to clarify the distinctions between Applicants' invention and McDonald et al.

The following is submitted to clarify the distinctions between this cited reference and Applicants' claimed invention.

The Office Action states that:

"McDonald et al. teach using an analyzer to measure a property of a chemical process, developing scores with the measured data and regressing the scores with a property such as viscosity or temperature to predict a property of interest."

Applicants submit this is not a fair statement of the actual teaching of McDonald and, in order to clarify the issues, provides a corresponding amended statement indicating Applicants' points:

"McDonald et al. teach using an analyzer to measure a property of a product manufactured in a chemical process, developing scores with the measured data and regressing the scores with a property of a product stream produced in the process such as viscosity or temperature of the product to predict a property of interest."

In contrast, Applicants take data (obtained from on-line analyzers) relating to a material or product produced in a chemical manufacturing process, transforming scores from such data correlative to a property of interest of the product (which cannot be measured directly by the on-line analyzers), and regressing these scores with statistically significant reactor process variables to generate an estimate of the property of interest.

Applicants point out that the data measured by the on-line analyzers are measured on the product, and should not be confused with reactor process variables, which relate to the process conditions in the reactor. Thus, a temperature of a product in a transfer line from a reactor is not the same as the temperature variable of the reactor.

Specifically, Applicants understand that the Examiner believes the temperature measurements described in McDonald et al. are the same as or must relate to the reactor process variables stated in Applicants' claims. This was not intended, and the amended language is submitted to clarify Applicants' invention. Applicants submit that the amendments only clarify Applicants' original intended scope.

It appears that the Examiner's position is that "the temperature of the product relates to the operation of the reactor and is therefore a reactor process variable." This is speculation and extends beyond the fair teaching of the cited reference. McDonald et al. measure product properties such as viscosity or temperature in a fluid flow stream which is outside the reactor (cf. col. 4, lines 6-18). There is no disclosed direct correlation between the measured product property and a reactor process variable.

Applicants submit that McDonald et al. do not teach or suggest data measured on product (such as viscosity and temperature) are mathematically correlated against reactor process variables as described and claimed by Applicants. The limit of the McDonald et al. disclosure is measuring product properties by on-line analyzers and attempting to correlate those measurements to product properties. Applicants take scores from on-line analyzers correlative to a product property and further regress these scores with one or more statistically significant process variables to obtain a better estimate of the property.

Therefore, Applicants submit that the amendments made herein clearly clarify the inventive distinction between McDonald et al. and the Applicants' claimed invention.

Summary

Applicants submit that all claims now presented are in condition for allowance and request that the Examiner reconsider the rejections made in the last Office Action.

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Respectfully submitted,



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